REMARKS

The feature of the invention as defined in currently amended claim 1 is that the thin film solid electrolyte has thickness of 20 μmor below and the solid electrolyte is either lithium ion conductive crystal or a lithium ion conductive glass-ceramics. This recitation is supported by the original specification at page 4, line 5.

Ota et al describes in column 4, 14-19 that the inorganic solid electrolytic layer becomes polycrystallized and porous, making it difficult to form a dense, continuous film of the inorganic solid electrolyte. That is, polycrystallization and porosity are both causes that make it difficult to form a dense continuous film of the inorganic solid electrolyte.

The Examiner has previously noted at page 5 of the Office Action of March 7, 2007 that Ota et al teaches a polycrystalline layer is undesirable because it would be porous (column 4 line 15-23). Applicant respectfully states that a polycrystalline layer is undesirable even if it is not porous.

Applicant respectfully states that the material of Fu is neither a monocrystal nor a very large crystal but a polycrystallized material in which many crystals precipitate in a glass phase. The material of Fu is not porous but nevertheless it is polycrystallized and, therefore, according to the teaching of Ota et al, the material of Fu is considered to make it difficult to form a dense continuous film when it is desired to form a thin film. Thus, it would not be obvious to combine Ota et al with Fu but in fact teaches away from such combination.

Fu discloses that glass ceramics can be formed into a thin film by utilizing the characteristic of glass (column 2, lines 8-10). The "thin film" in Fu, however, has a thickness within a range which can be realized by utilizing the characteristic of glass. Fu never discloses that it can obtain a thin film having a thickness of a 20 μm or below as in the present invention. The method for manufacturing glass ceramics disclosed by Fu is to cast molten glass into an iron plate to form glass in the form of a sheet, cut the sheet and polish cut pieces on both sides and heat treat the polished glass pieces at 800°C to 1000°C (Example 1). It is, however, known in the art that a thin film of 20 μm or below can

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never be obtained by such manufacturing method because the film will be broken in the process of polishing if such manufacturing method is used. Fu does not disclose any other method for producing a thin film. Accordingly, nothing in Fu suggests a combination of teachings of Fu with Ota.

The present invention includes the formation of a thin film even if the material used in a polycrystallized material and has realized the solid electrolyte in the form of a thin film having a thickness of 20 μm or below by forming the solid electrolyte directly on the positive and/or negative electrode material with the positive or negative electrode being utilized as a support.

The Examiner has pointed out that the motivation of combining Ota et al with Fu is "to make an electrolyte that is easier to handle, easier to form, and high in conductivity" (page 5, second paragraph of the Office Action.) As for the electrolyte being made by using the method of manufacture disclosed by Fu, the material of Fu is easy to form and has high conductivity, but Fu does not disclose whether such easiness in handling and forming and high conductivity can be realized when the electrolyte is made by using the method of manufacture disclosed by Ota et al.

It is therefore only a second thought to consider that the present invention has been made by a mere aggregation of elements from Ota et al and Fu.

The lithium ion secondary battery of the present invention therefore is not obvious from combination of Ota et al and Fu.

An early and favorable action is earnestly solicited.

Respectfully Submitted,

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